

Figure 1

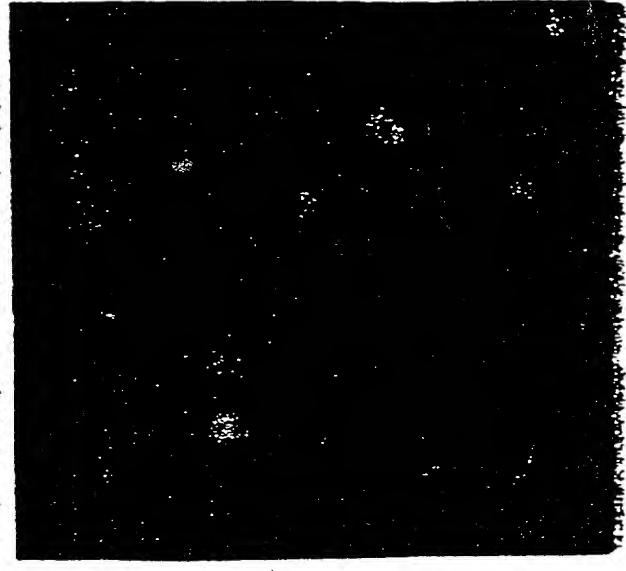
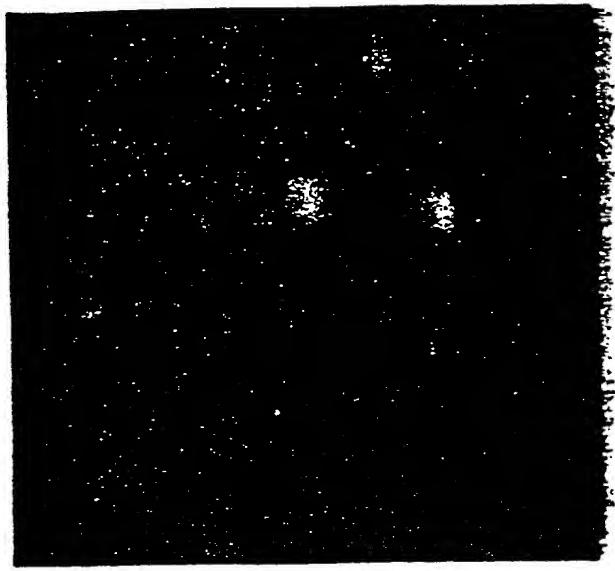
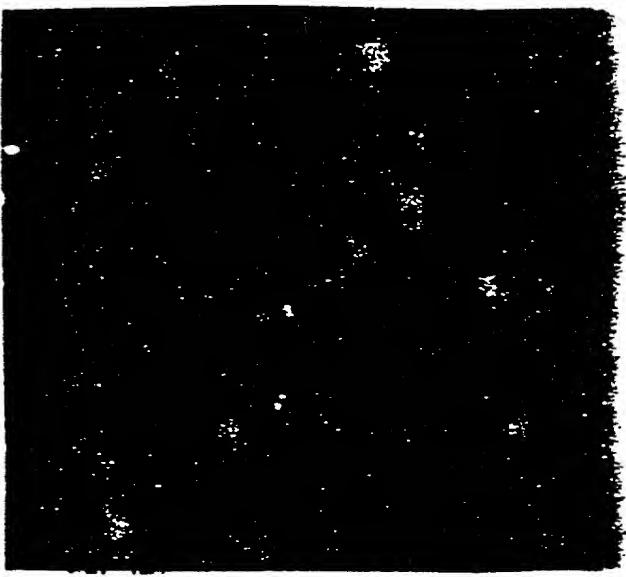
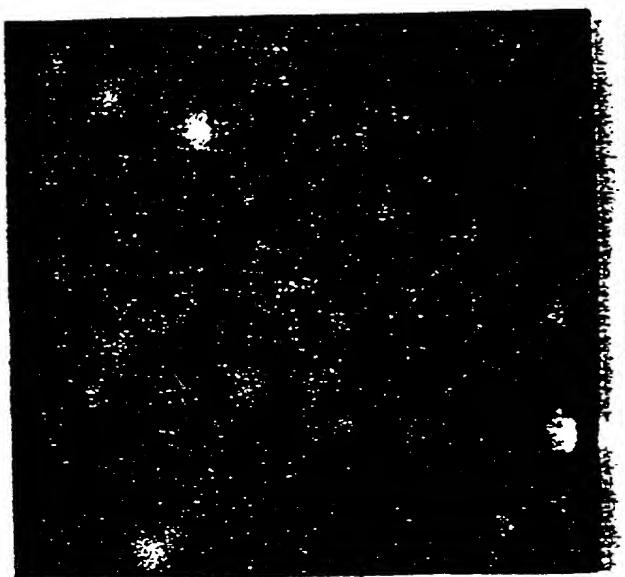
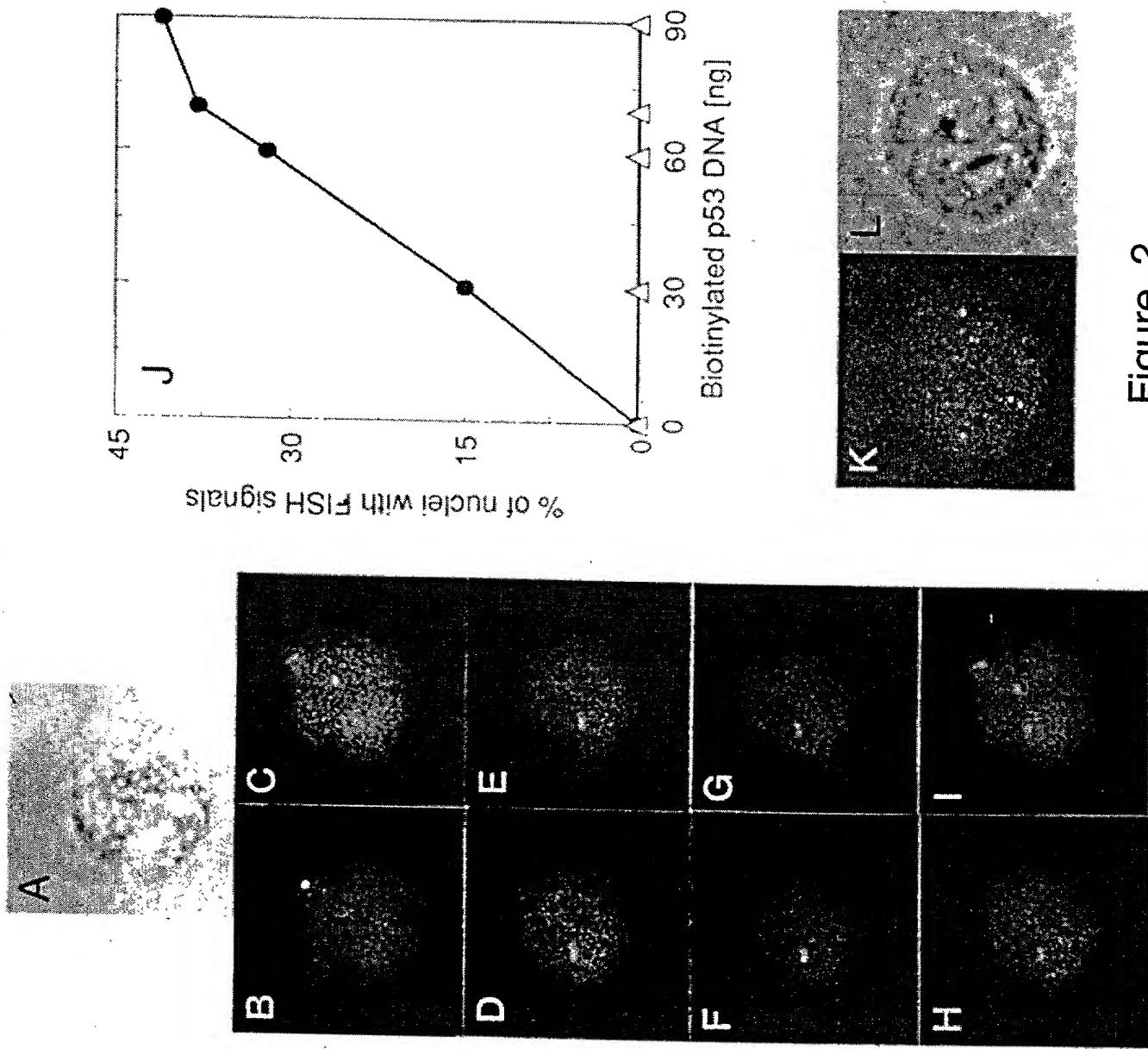


Figure 2



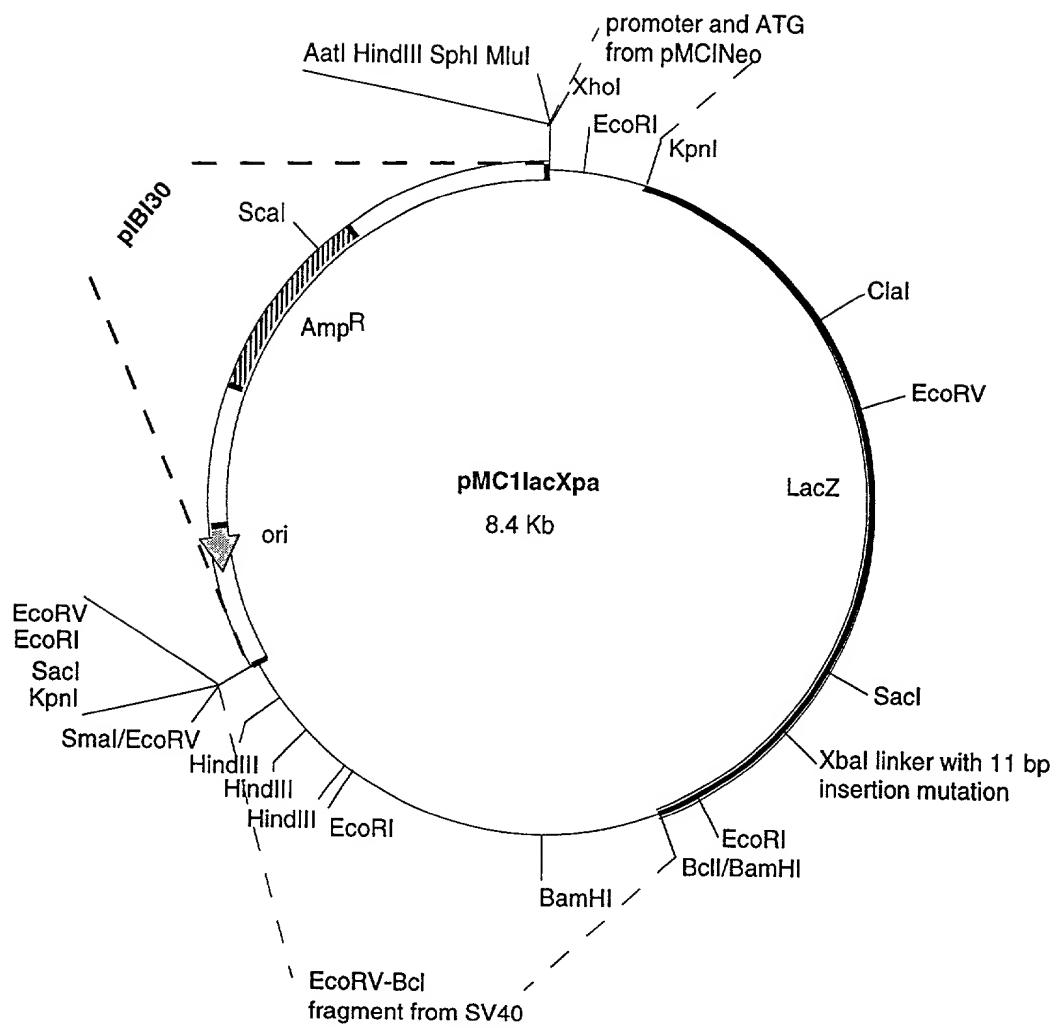


FIGURE 3

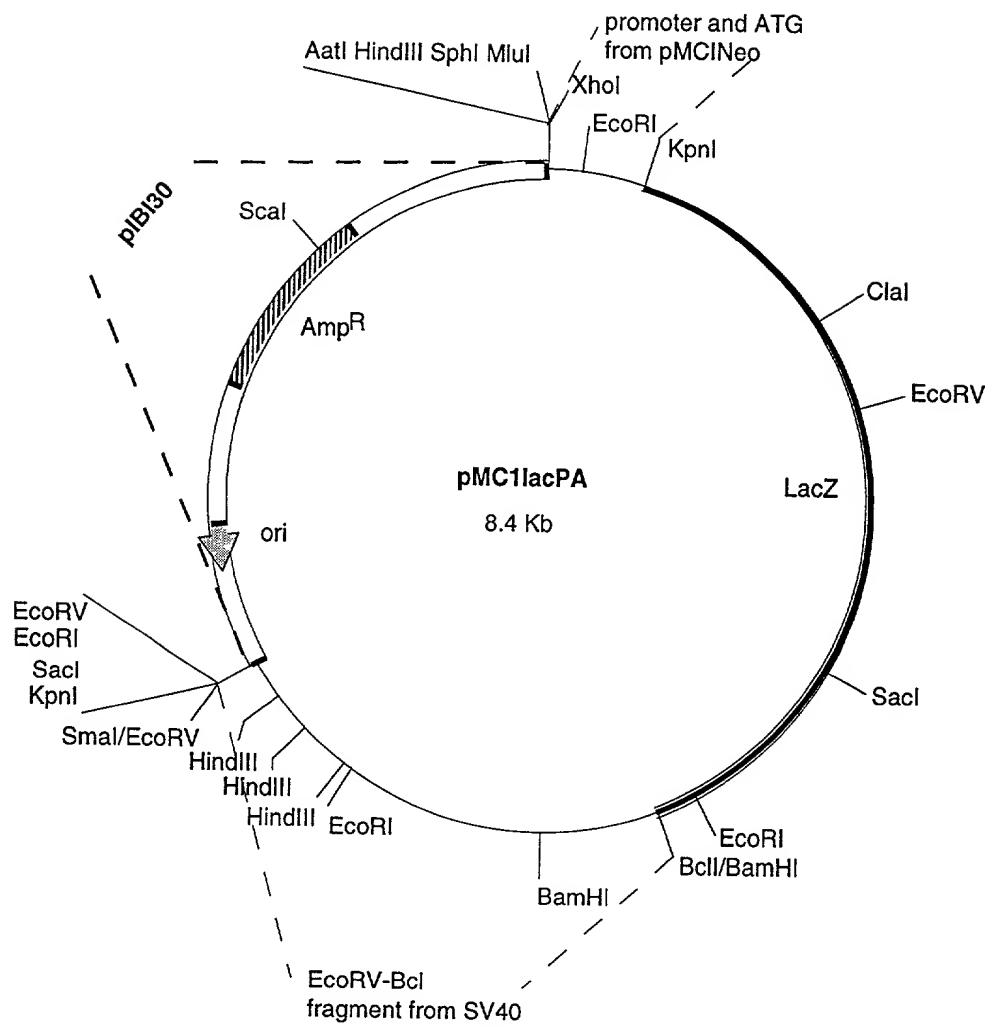
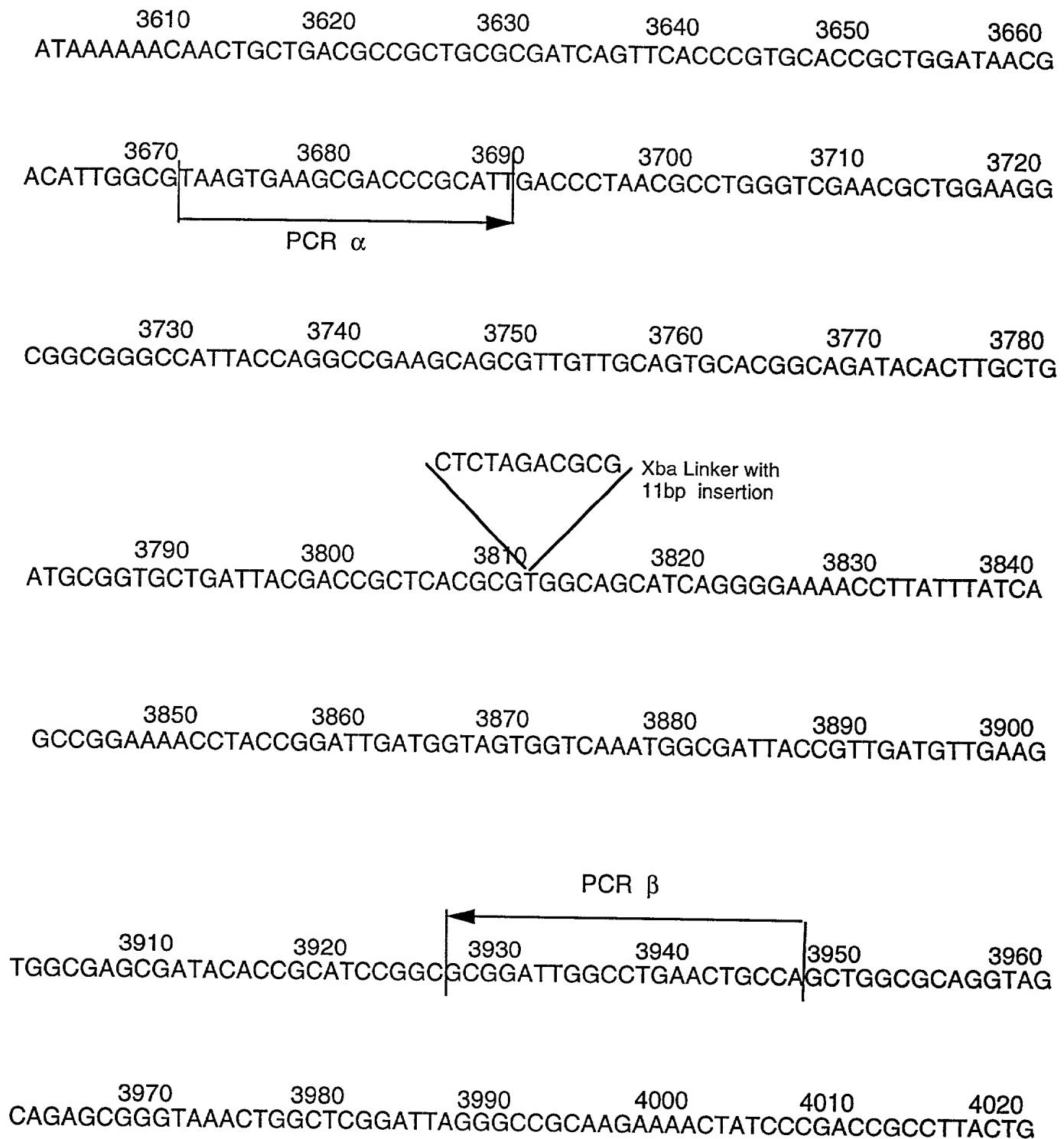


FIGURE 4

Figure 5



**TEST FOR ALTERATION OF AN INSERTION MUTATION IN THE lacZ
(β -GALACTOSIDASE) GENE OF EUKARYOTIC EXPRESSION VECTOR**

Experimental Sample	Injected Plasmid, 276-mer DNA and RecA Protein	Number of Injected Surviving Cells	Number of Surviving Cells Scoring Blue	Surviving Cells Scoring Blue (%)
1	pSV- β -gal -276-mer - RecA	168	21	12.5
2	pMC1lacpa - 276-mer - RecA	98	9	9.2
3	pMC1lacXpa - 276-mer - RecA	173	0	0
4	pMC1lacXpa + 276-mer - RecA	103	0	0
5	pMC1lacXpa + 276-mer + RecA	168	6	3.6

Figure 6

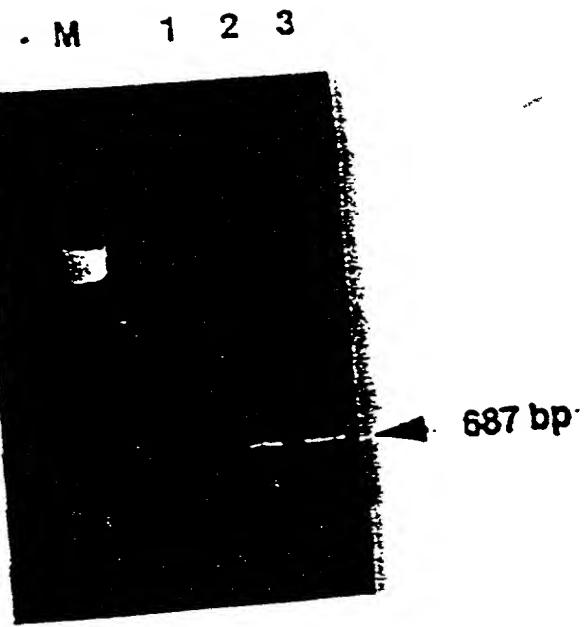
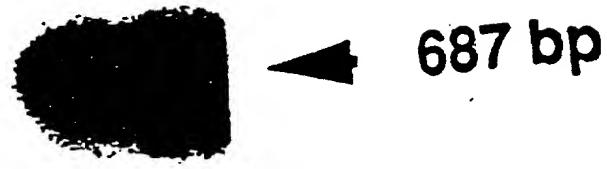


Figure
7A

Control (Σ CF)
 T^{Σ} CF Microinjected
 T^{Σ} CF P.L

Figure
7B



1 2 3 4 5 6

300 ➤

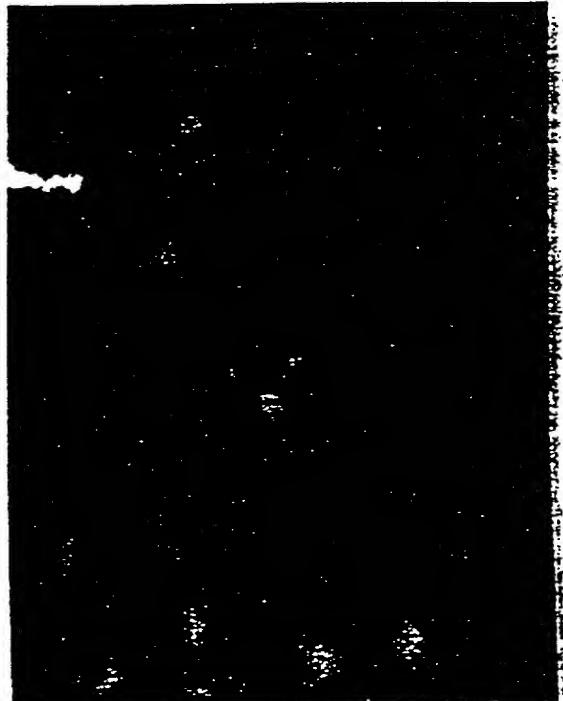


Figure
8A

1 2 3 4 5

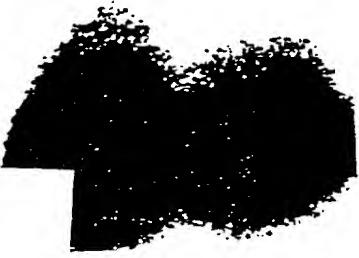


Figure
8B

299 ▲

1 2 3



Figure
9

Scheme for recombination assay

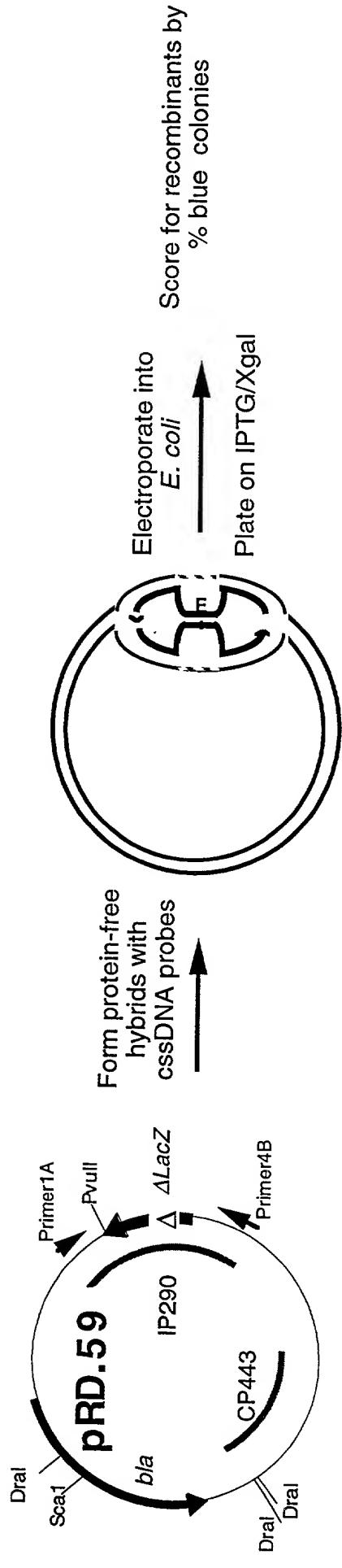


Figure 10

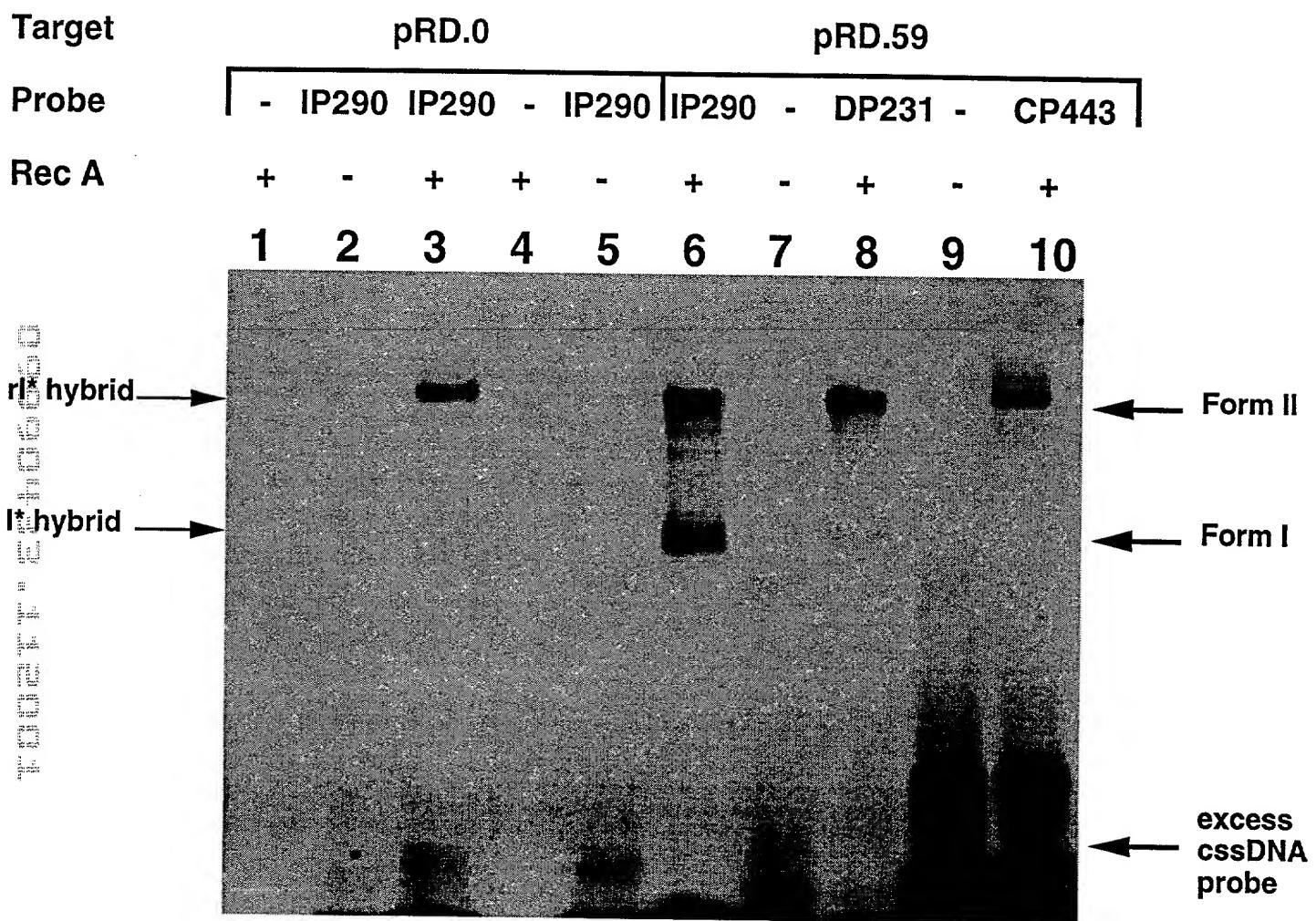


FIGURE 11

cssDNA Probe:Target Hybrids Enhance Homologous Recombination

Target	Probe	RecA coating	Host	%Recombinant / total colonies	
				RecA+	RecA-
pRD.59	-	+	RecA+	0	0
	-	+	RecA-	0	0
pRD.59	IP290	-	RecA+	0	0
	IP290	-	RecA-	0	0
pRD.59	IP290	+	RecA+	3	3
	IP290	+	RecA-	0	0
pRD.59	DP290	-	RecA+	0	0
	DP290	-	RecA-	0	0
pRD.59	DP290	+	RecA+	0	0
	DP290	+	RecA-	0	0
pRD.59	CP443	-	RecA+	0	0
	CP443	-	RecA-	0	0
pRD.59	CP443	+	RecA+	0	0
	CP443	+	RecA-	0	0

Figure 12

Stable

Unstable

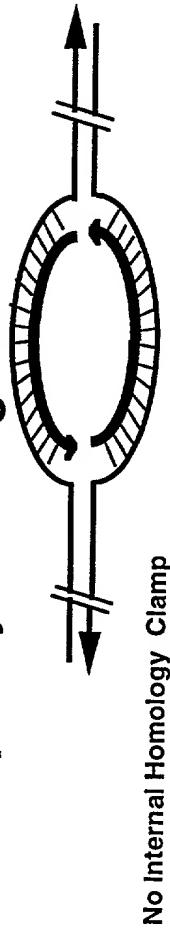
Four-strand hybrids

All DNA probe and target strands are paired

Three-strand hybrids

Certain regions of DNA probe or target strands are unpaired

A. Target DNA completely homologous



No Internal Homology Clamp

B. Target DNA with a deletion



Internal Homology Clamp
formed by cssDNA probe

C. Target DNA with an insertion



Internal Homology Clamp
formed by dsDNA target

Figure 13

Figure 14A

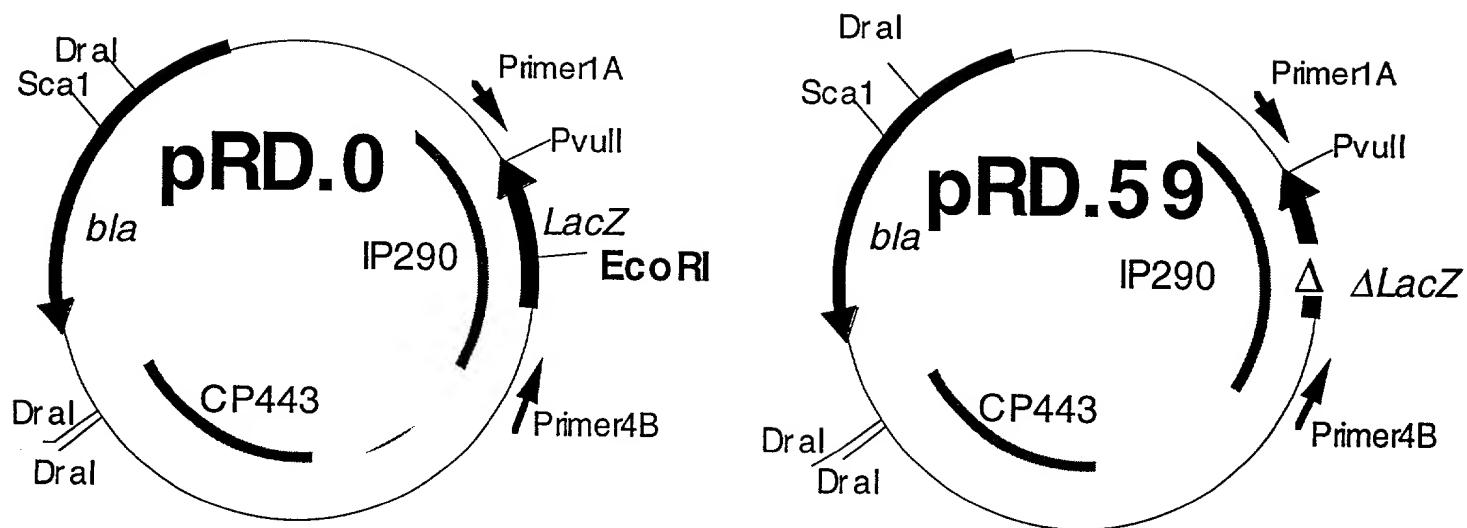
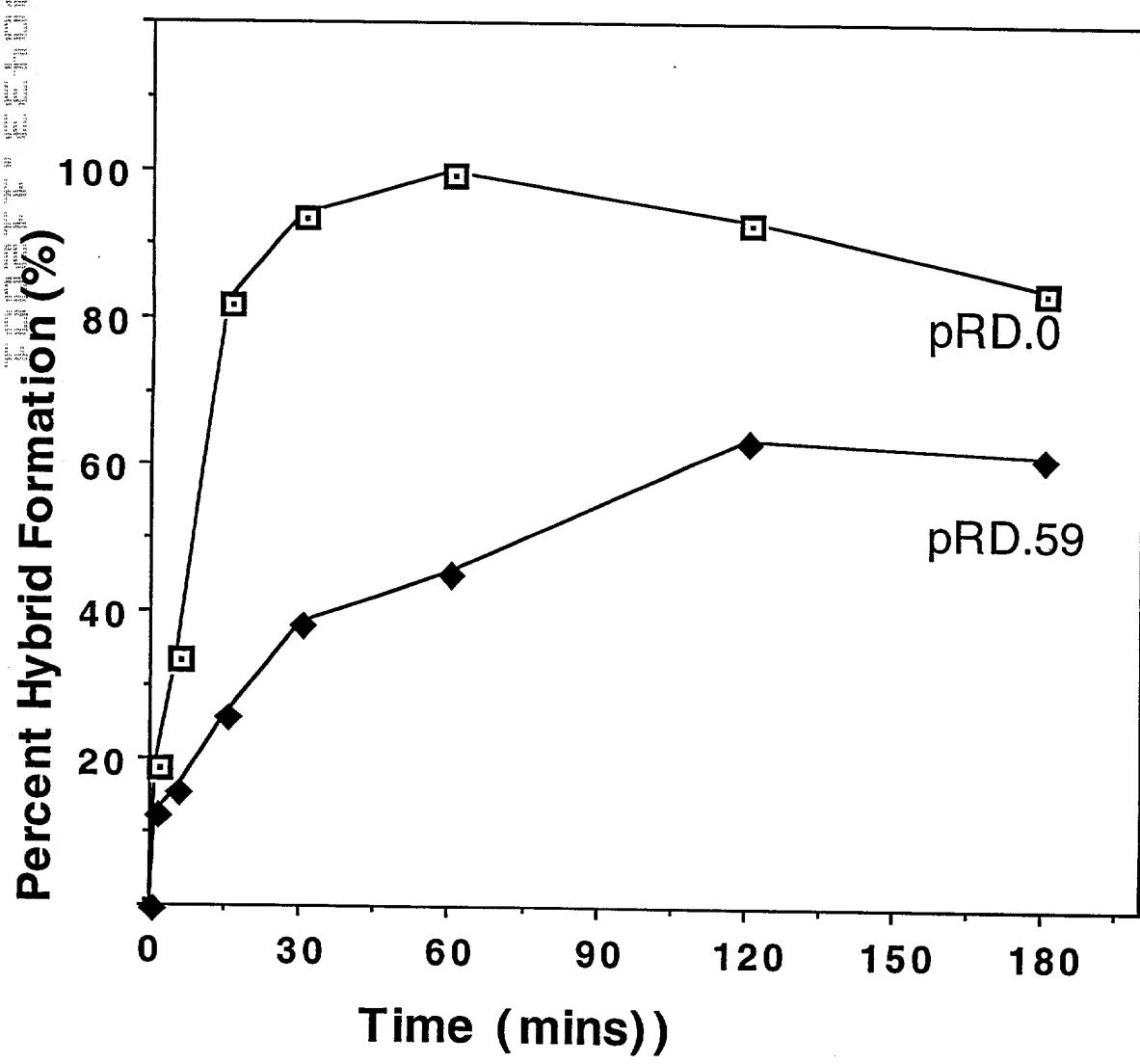


Figure 14B



A.

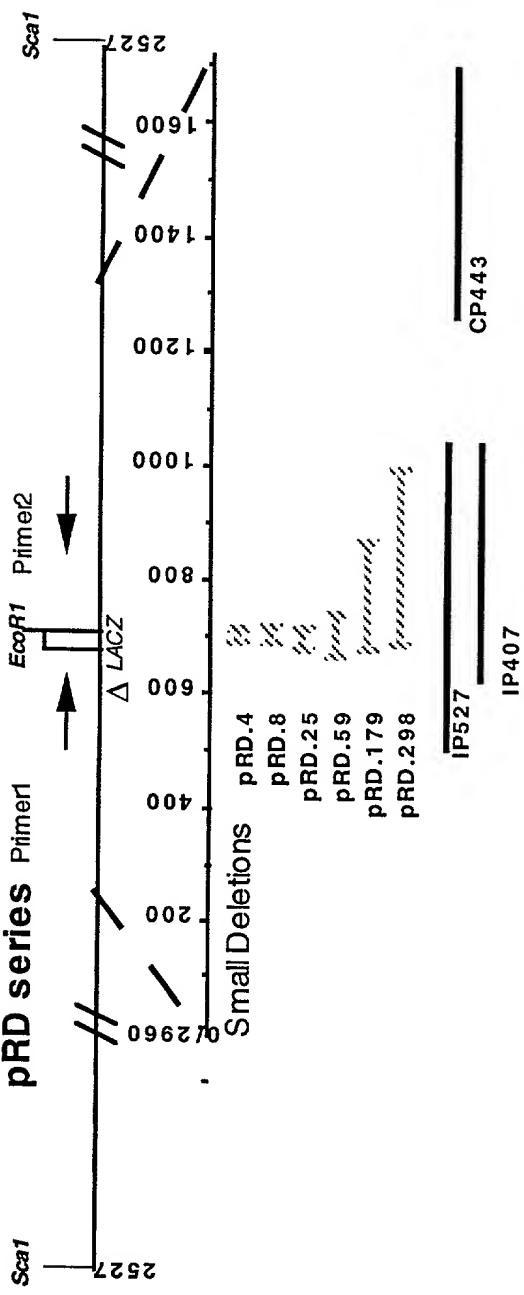


Figure 15A

Figure 15B

Figure 15C

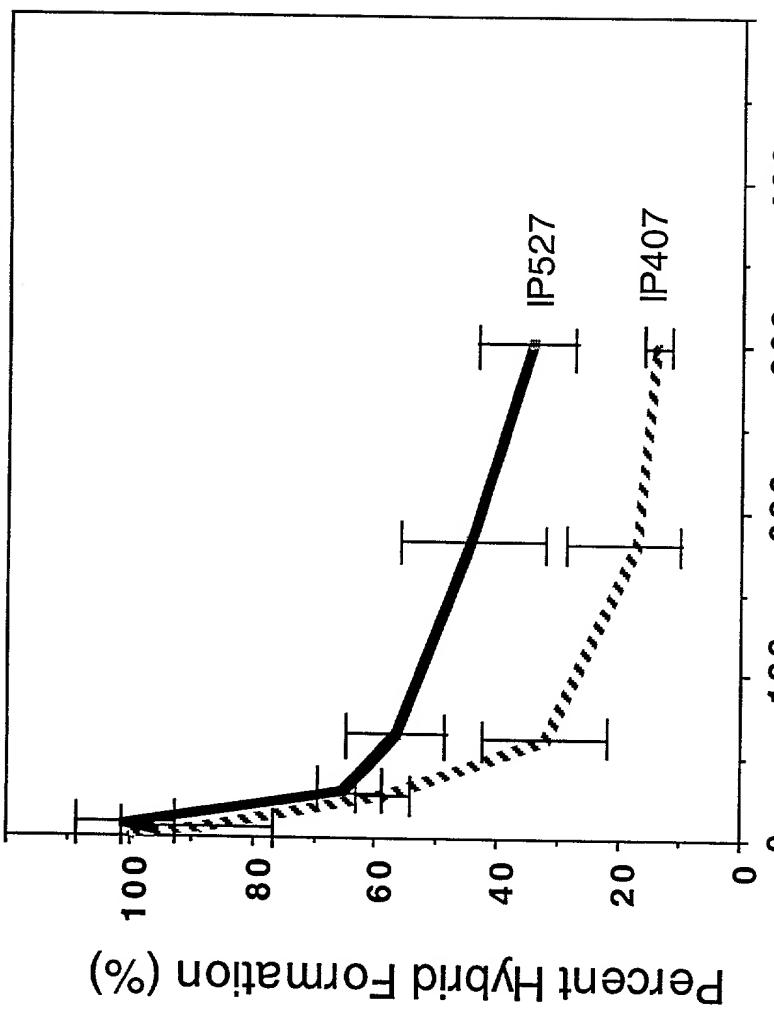
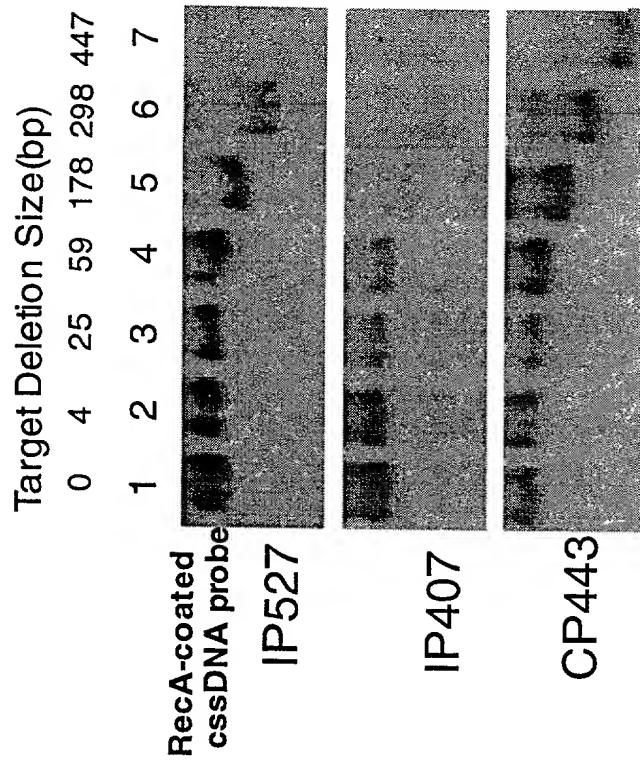
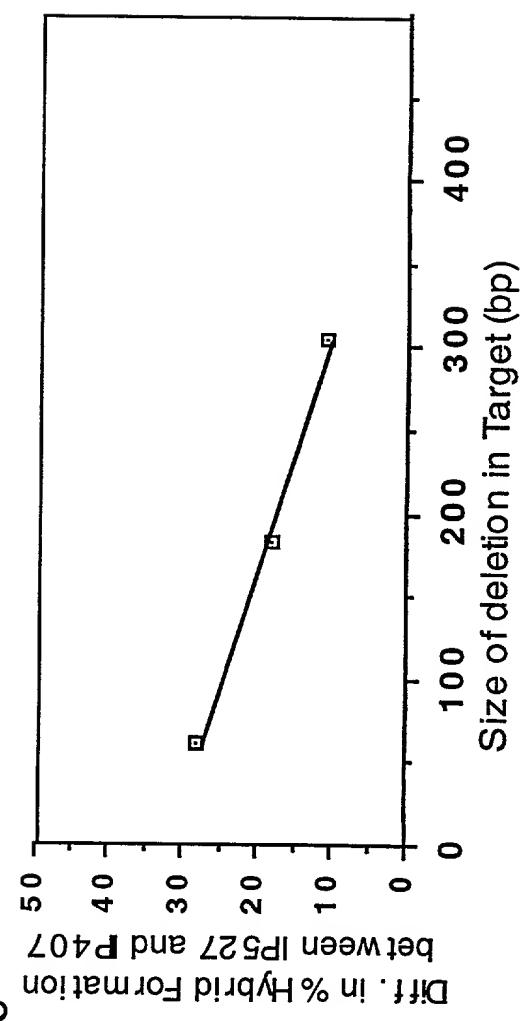


Figure 15D



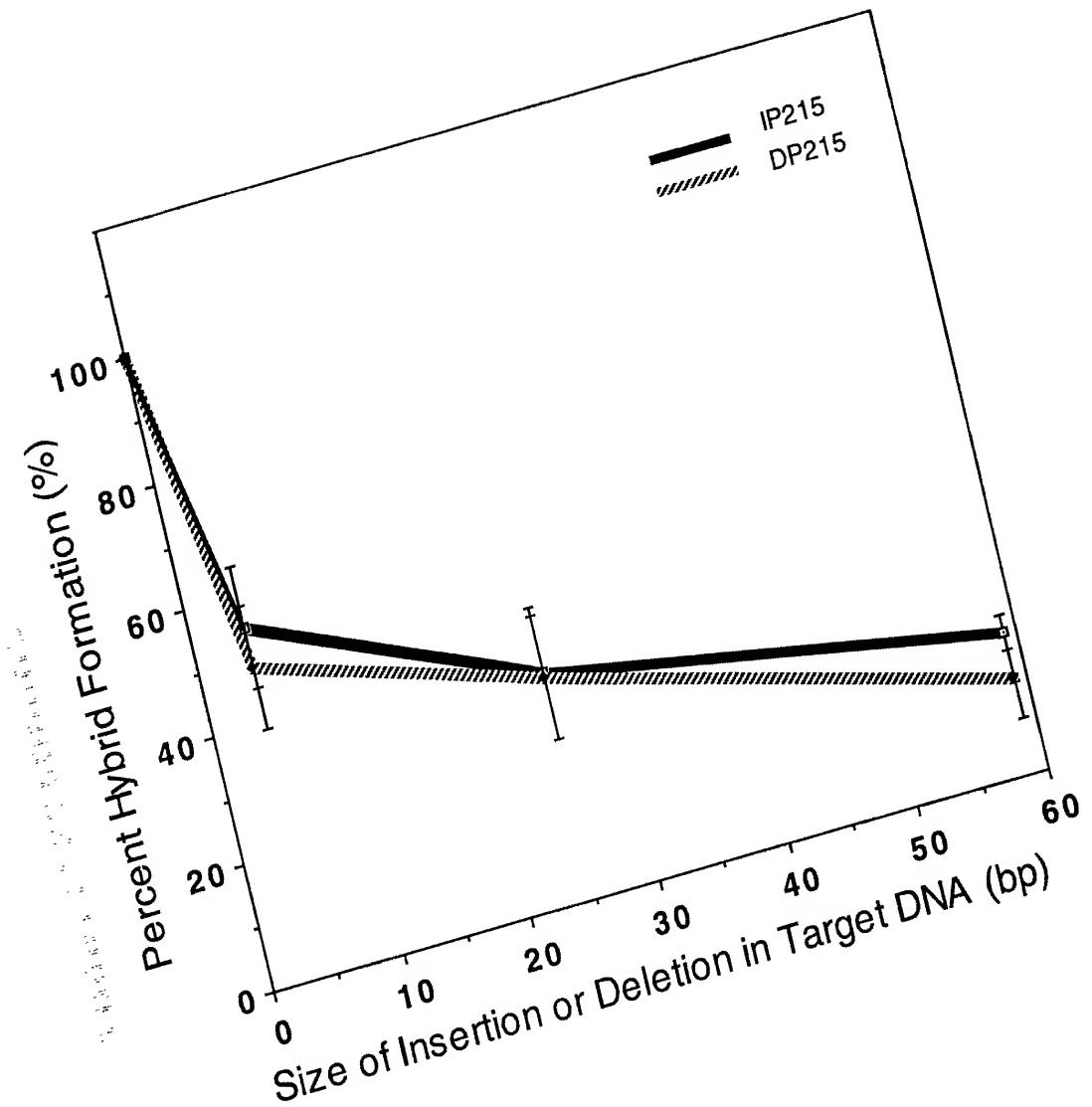


Figure 16

Figure 17A

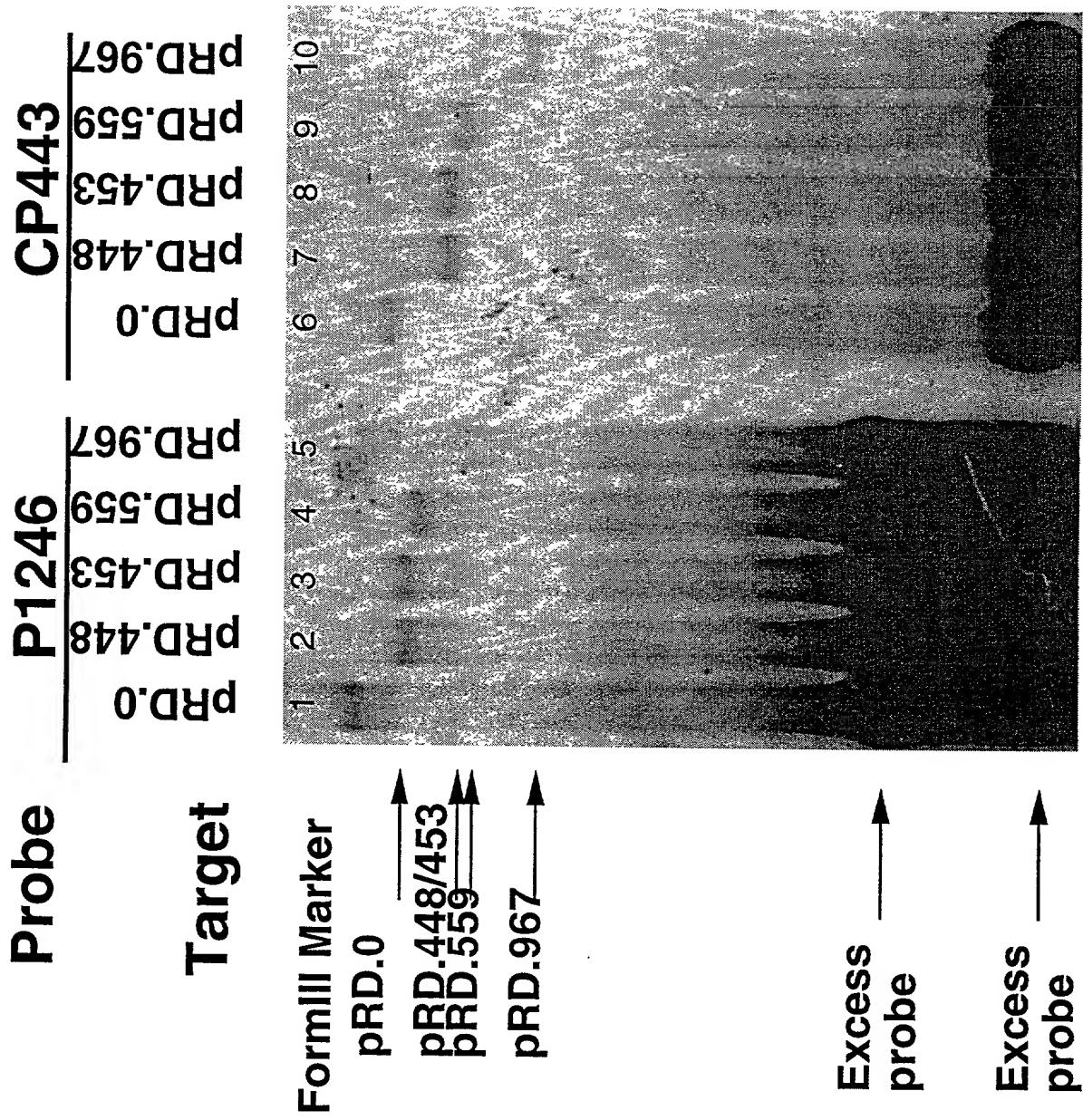


Figure 17B

TARGET DNA	AMT. HOMOL. (bp)	RELATIVE HYBRIDIZATION
pRD.0	1246	1.0
pRD.448	798	0.8
pRD.453	793	0.8
pRD.559	687	0.8
pRD.967	279	0.3

Figure 17C

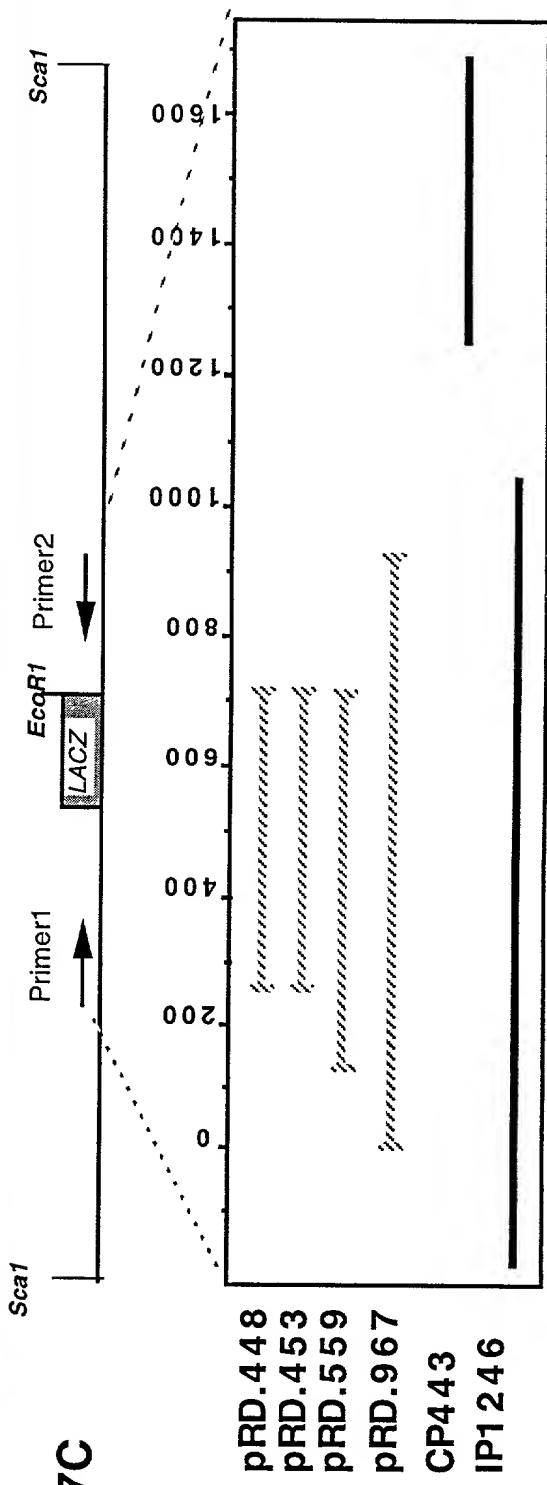


Figure 18

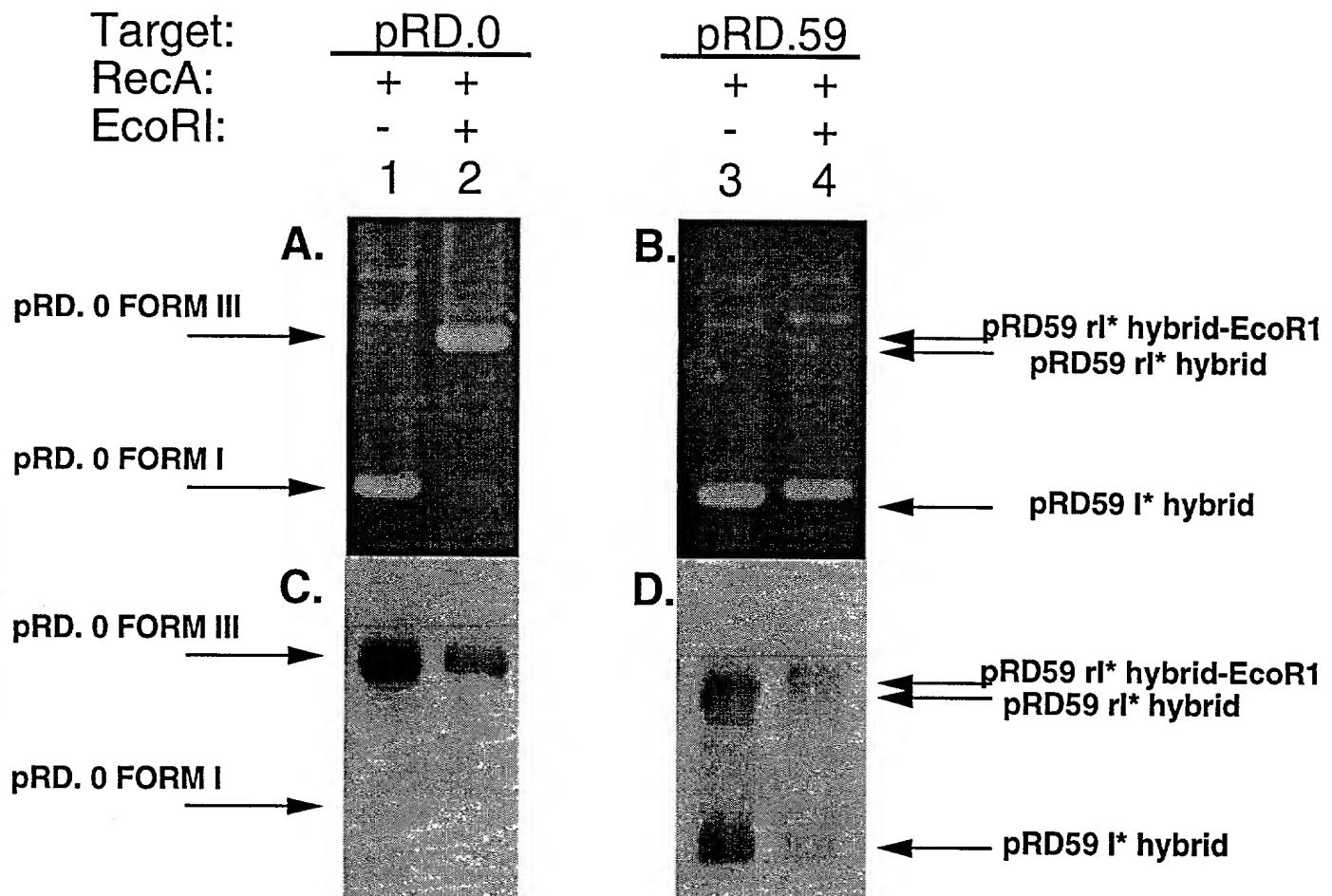
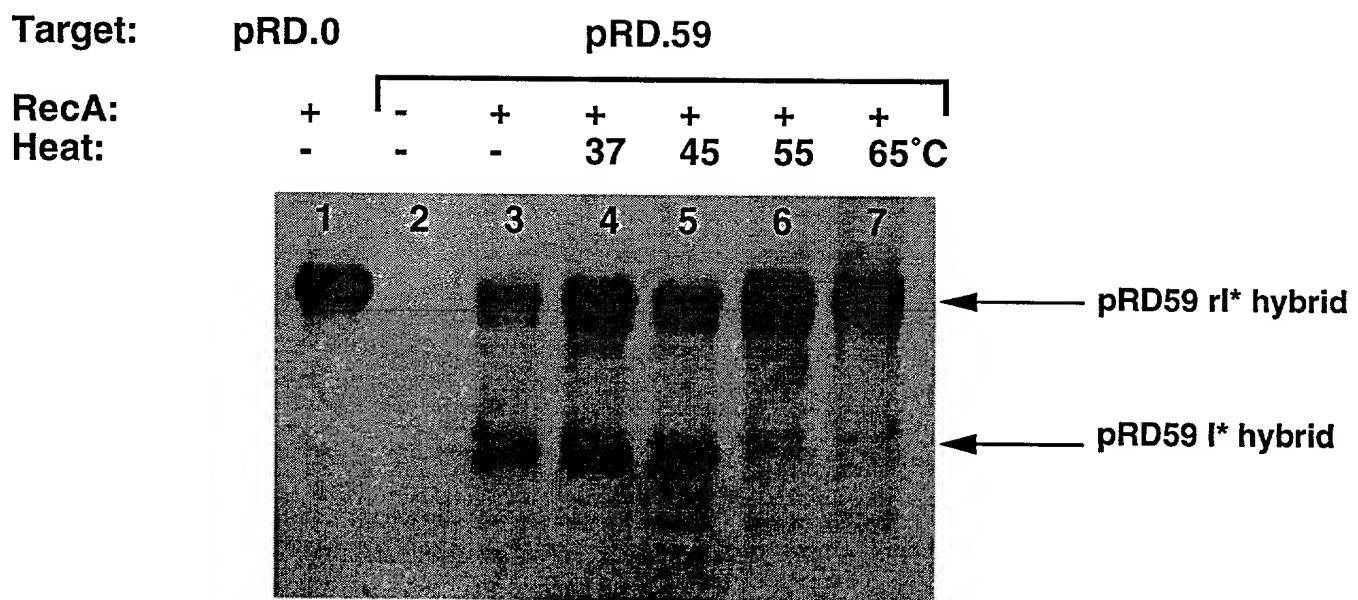
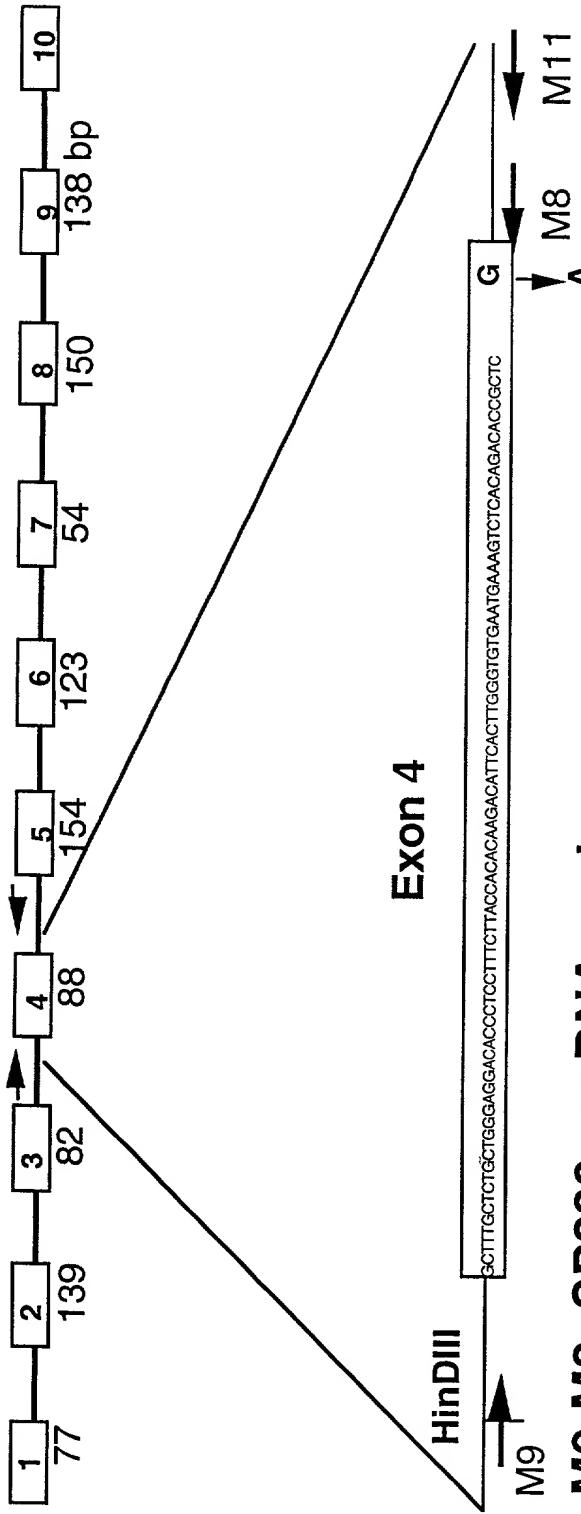


Figure 19



Mouse Ornithine Transcarbamylase Gene

Figure 20A



M9-M8: SP230 cSSDNA probe

Figure 20B

spf-ash
mutation

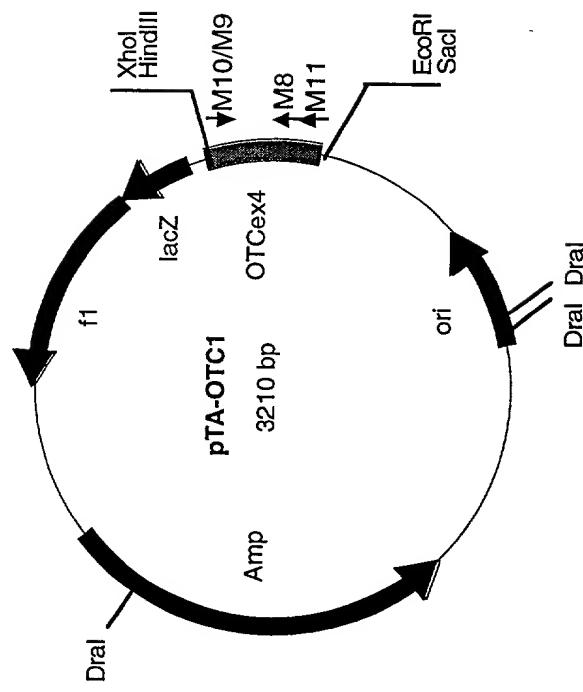


Figure 21 OTC exon4 DNA sequence determination

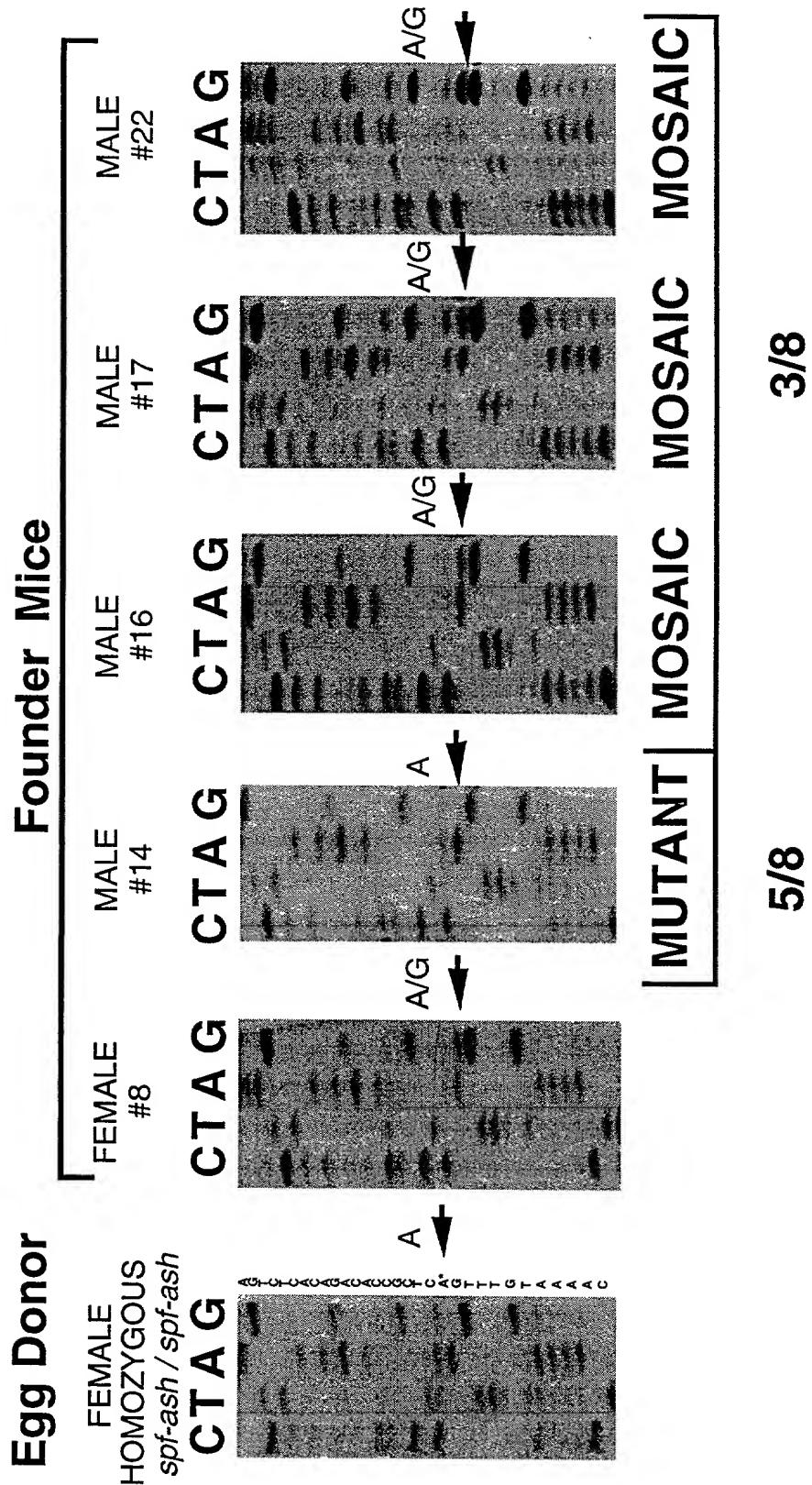


Figure 22

Germine Transmission of EHR Corrected OTC⁺ Allele

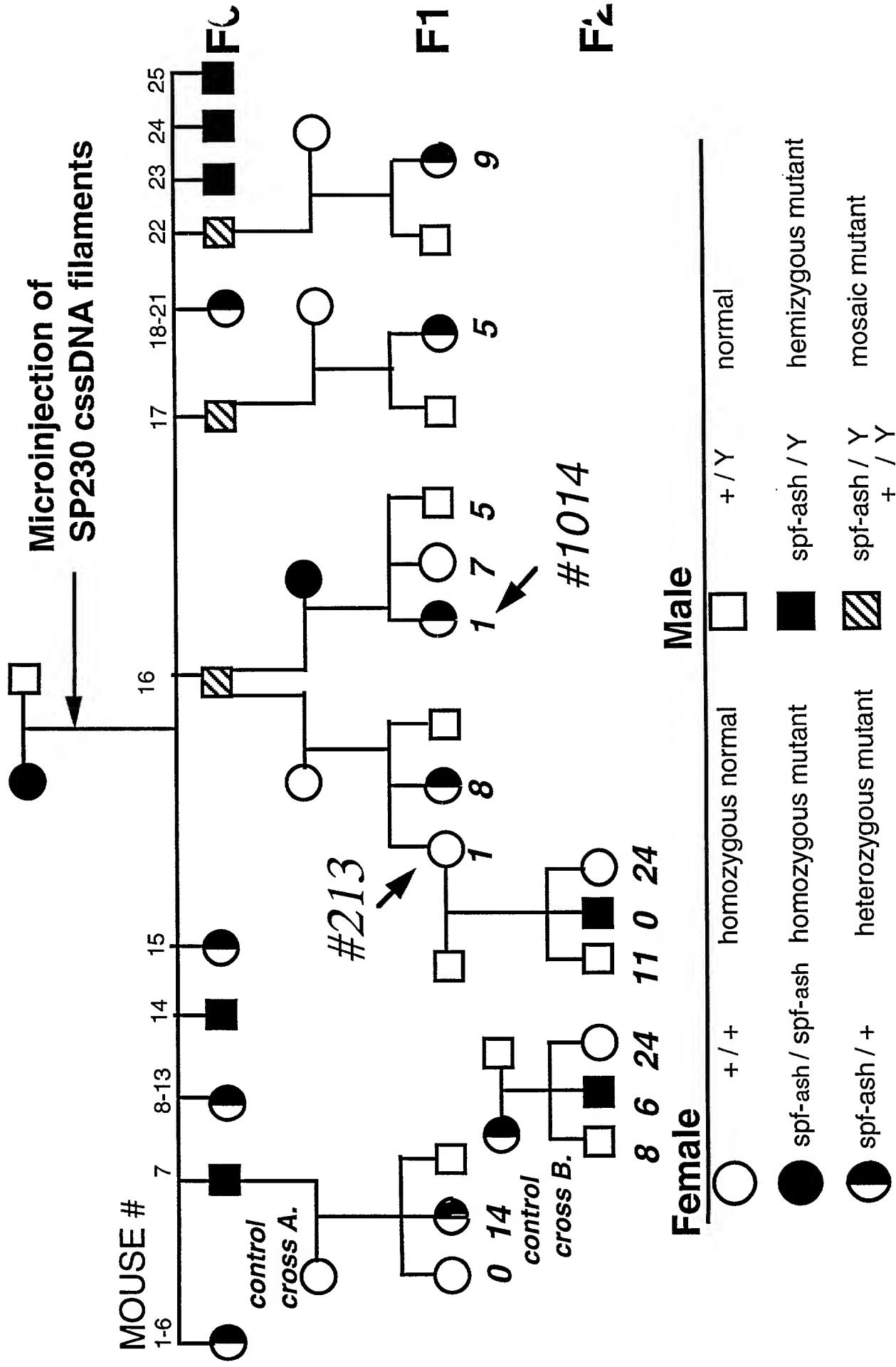


Figure 23 Germine Transmission of Corrected Allele of F0 Male #16

